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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/US99/01619 (22) International Filing Date: 28 January 1999 (28.01.99) (30) Priority Data: <table><tr><td>60/072,910</td><td>28 January 1998 (28.01.98)</td><td>US</td></tr><tr><td>60/075,954</td><td>24 February 1998 (24.02.98)</td><td>US</td></tr><tr><td>60/080,114</td><td>31 March 1998 (31.03.98)</td><td>US</td></tr><tr><td>60/080,515</td><td>3 April 1998 (03.04.98)</td><td>US</td></tr><tr><td>60/080,666</td><td>3 April 1998 (03.04.98)</td><td>US</td></tr></table> (71) Applicants (for all designated States except US): CHIRON CORPORATION [US/US]; 4560 Horton Street, Emeryville, CA 94608 (US). HYSEQ INC. [US/US]; 675 Almanor Avenue, Sunnyvale, CA 94086 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): WILLIAMS, Lewis, T. [US/US]; 3 Miroflores, Tiburon, CA 94920 (US). ESCOBEDO, Jaime [CL/US]; 1470 Lavoma Road, Alamo, CA 94507 (US). INNIS, Michael, A. [US/US]; 315 Constance Place, Moraga, CA 94556 (US). GARCIA, Pablo, Dominguez [CL/US]; 882 Chenery Street, San Francisco, CA 94131 (US). SUDDUTH-KLINGER, Julie [US/US]; 280 Lexington Road, Kensington, CA 94707 (US). REINHARD, Christoph [DE/US]; 1633 Clinton Av-			60/072,910	28 January 1998 (28.01.98)	US	60/075,954	24 February 1998 (24.02.98)	US	60/080,114	31 March 1998 (31.03.98)	US	60/080,515	3 April 1998 (03.04.98)	US	60/080,666	3 April 1998 (03.04.98)	US	enue, Alameda, CA 94501 (US). GIESE, Klaus [DE/US]; 1009 Carolina Street, San Francisco, CA 94107 (US). RANDAZZO, Filippo [US/US]; 6363 Christie Avenue #2511, Emeryville, CA 94608 (US). KENNEDY, Giulia, C. [US/US]; 360 Castenada Avenue, San Francisco, CA 94116 (US). POT, David [CA/US]; 1565 5th Avenue #102, San Francisco, CA 94112 (US). KASSAM, Altaf [US/US]; 394 49th Street, Oakland, CA 94609 (US). LAMSON, George [US/US]; 232 Sandringham Drive, Moraga, CA 94556 (US). DRMANAC, Radoje [YU/US]; 850 East Greenwich Place, Palo Alto, CA 94303 (US). CRKVENJAKOV, Radomir [YU/US]; 762 Haverhill Drive, Sunnyvale, CA 94068 (US). DICKSON, Mark [US/US]; 1411 Gabilan Drive #B, Hollister, CA 95025 (US). DRMANAC, Snezana [YU/US]; 850 East Greenwich Place, Palo Alto, CA 94303 (US). LABAT, Ivan [YU/US]; 140 Acalanes Drive, Sunnyvale, CA 94086 (US). LESHKOWITZ, Dena [US/US]; 678 Durshire Way, Sunnyvale, CA 94087 (US). KITA, David [US/US]; 899 Bounty Drive, Foster City, CA 94404 (US). GARCIA, Veronica [ES/US]; 911 Shell Boulevard #102-0, Foster City, CA 96606 (US). JONES, William, Lee [US/US]; 4290 Albany Drive #P-146, San Jose, CA 95129 (US). STACHE-CRAIN, Birjit [DE/US]; 345 South Mary Avenue, Sunnyvale, CA 94086 (US). (74) Agent: BLACKBURN, Robert, P.; Chiron Corporation, P.O. Box 8097, Emeryville, CA 94662-8097 (US). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
60/072,910	28 January 1998 (28.01.98)	US																
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60/080,666	3 April 1998 (03.04.98)	US																
(54) Title: HUMAN GENES AND GENE EXPRESSION PRODUCTS II																		
(57) Abstract <p>This invention relates to novel human polynucleotides and variants thereof, their encoded polypeptides and variants thereof, to genes corresponding to these polynucleotides and to proteins expressed by the genes. The invention also relates to diagnostic and therapeutic agents employing such novel human polynucleotides, their corresponding genes or gene products, e.g., these genes and proteins, including probes, antisense constructs, and antibodies.</p>																		

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 XX Human; gene; gene expression product; diagnosis; therapy; probe;
 DE detection; mapping; tissue typing; profiling; forensic; cancer;
 KW genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
 KW Homo sapiens.
 OS WO9938972-A2.
 XX 05-AUG-1999.
 PD 28-JAN-1999; 99WO-US01619.
 XX 03-APR-1998; 98US-0080666.
 PR 28-JAN-1998; 98US-0072910.
 PR 24-FEB-1998; 98US-0075954.
 PR 31-MAR-1998; 98US-0080114.
 PR 03-APR-1998; 98US-0080515.
 XX (CHIR) CHIRON CORP.
 PA (HYSE-) HYSEQ INC.
 XX Crkvenjakov R, Dickson M, Drmanac R, Drmanac S;
 PI Escobedo J, Garcia PD, Garcia V, Glese K, Innis MA;
 PI Jones WL, Kassam A, Kennedy GC, Kita D, Labat I;
 PI Lamson G, Leshkowitz D, Pot D, Randazzo F, Reinhard C;
 PI Stache-Crain B, Sudduth-Klinger J, Williams LT;
 XX WPI; 1999-494092/41.
 DR Novel human genes and their expression products which are
 XX differentially expressed in different cell types
 PT Claim 1; Page 1897; 2479pp; English.
 PS The present invention describes a library of human polynucleotides
 XX comprising the sequences given in AAZ12532 to AAZ17779. Also described is
 CC a method of detecting differentially expressed genes correlated with the
 CC cancerous state of a mammalian cell, comprising detecting at least one
 CC differentially expressed gene product in a test sample from a cell
 CC suspected of being cancerous, where the gene product is encoded by one
 CC of the 5248 polynucleotide sequences given in AAZ12532 to AAZ17779. The

polynucleotides can be used as a source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, mapping, tissue typing or profiling, forensics, genetic analysis and detection of polymorphisms. Polypeptides encoded by the polynucleotides can be used for raising antibodies for experimental, diagnostic and therapeutic purposes. The polynucleotides may also be used to construct arrays for diagnostics (which may be used to determine function of an encoded protein); and to detect differences in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to identify a genetic predisposition or susceptibility to a disease such as cancer). The polynucleotides of the invention are especially used in the diagnosis, prognosis and management of colorectal cancer, breast cancer, and lung cancer. The polynucleotides can also be used to screen for peptide analogues and antagonists.

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Query Match 18.5%; Score 414; DB 20; Length 772;

Best Local Similarity 100.0%; Pred. No. 3.7e-163;

Matches 414; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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XX AAZ14980;

XX 12-OCT-1999 (first entry)

DE Human gene expression product cDNA sequence SEQ ID NO:2449.

XX Human; gene; gene expression product; diagnosis; therapy; probe;

XX detection; mapping; tissue typing; profiling; forensic; cancer;

XX genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.

XX Homo sapiens.

XX WO9938972-A2.

XX 05-AUG-1999.

XX 28-JAN-1999; 99WO-US01619.

XX 03-APR-1998; 98US-0080666.